

LONG ISLAND BOTANICAL SOCIETY NEWSLETTER

November - December 1993 Vol. 3, No. 6

In This Issue

John Turner has written on the newly passed "Pine Barrens Protection Act". This act seeks to protect a large portion of the Pine Barrens through creation of two development zones.

Lance Biechele has submitted an in depth account of a group of plants, in the broad sense, the myxobacteriales, which are generally over looked.

Mary Laura Lamont has written of her days as a naturalist at West Hills County Park. She describes finding several rare or unusual plants for Long Island at the site.

If you have ever experienced the pleasure of splitting oak logs you will want to read Thomas Allen Stock's article about splitting oak.

The Education Committee received an award for their display at the Fall Flowers and Landscape Show at Planting Fields Arboretum.

DON'T FORGET THE ELECTION. The November meeting is when officers will be elected for the 1994-1995 period. You must be present to vote.

PROGRAMS

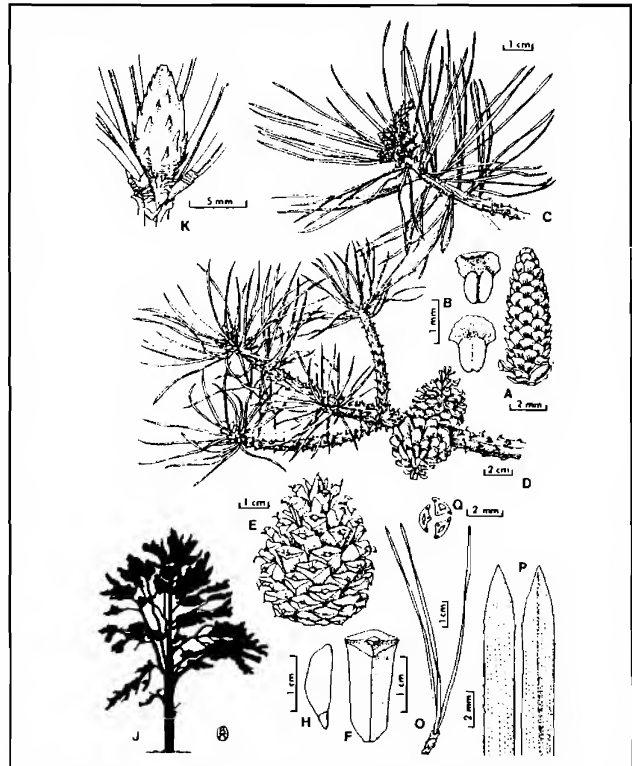
9 Nov. 1993 - 7:30 pm*, Paul Martin Brown, "The Fringed Orchids & Their Allies;" Planting Fields Arboretum (The Haybarn), Oyster Bay. For directions to PFA call: 516-922-9200.

14 Dec. 1993 - 7:30 pm*, Stephen Young, "The Rarest Plants of New York;" Uplands Farm Nature Center, Cold Spring Harbor.

* Refreshments are available starting at 7:30 pm, the meeting begins at 8 pm.

Pine Barrens Protection Act

The 1993 session of the State Legislature, if not the most productive for environmental protection measures ever held, certainly rates near the top. Passed during the session included the Pine Barrens Protection Act, the Environmental Protection Act (a.k.a. The Environmental Trust Fund), a bill to establish a Biodiversity Institute, a bill implementing the federal Clean Air Act, and legislation dedicating the two large DEC managed Pine Barrens parcels to the State's Nature Preserve system.



Pinus rigida Miller. From Cope, E. A. 1992. Pinophyta (Gymnosperms) of New York State. NYS Mus. Bull. 483.

The Pine Barrens Protection Act is the culmination of four years of legal action between the environmental and development communities regarding the fate of the Pine Barrens. And as you might expect in any compromise both sides had to give a little.

The legislation establishes a 50,000 acre core area where development is excluded, surrounded by a 50,000

acre Compatible Growth Area where limited development may be allowed. Land protection strategies for the core area and allowable land uses and development densities for the compatible growth area will be detailed in a comprehensive management plan. The plan will be prepared under the aegis of a five member Pine Barrens Commission consisting of the County Executive, the three affected town supervisors (Brookhaven, Riverhead, Southampton) and a Governor's appointee. The plan must be completed within eighteen months.

A twenty-eight member advisory committee to provide advice to the Commission is established. Representatives from the environmental community, civic groups, and business and development interests serve on the committee.

Transfer of development rights, also known as TDR, will probably be the most widely used land protection technique to protect land within the core area. Under TDR a landowner in the core or "sending zone" can see his rights to develop his land to an owner in the "receiving zone". Portions of the compatible growth area will likely be targeted for some of this redirected development. Direct acquisition will also play an important role in preserving privately-owned parcels situated within the core area.

Of particular interest to members of the Long Island Botanical Society is a requirement for the plan to include a plan to implement a prescribed burn regimen; inclusion reflects the historical importance fire has played in shaping the communities and landscapes of the Pine Barrens.

To date, the Commission has formally adopted a map depicting the two zones, established a schedule for meetings, and adopted interim rules and regulations to guide development that is grandfathered pursuant to the legislation.

Coastal Plain Pondshore Publication

Many of us know that the coastal plain pondshores of Long Island support one of the highest concentrations of rare plants in New York. But the last detailed publications of the community appeared in the literature about 50 years ago. The Torrey Botanical Club has recently published: "The status of the Coastal Plain Pondshore community in New York," by Robert Zaremba and Eric Lamont. The article includes discussion on the community's general characteristics, vegetation zones, rare plants, threats, and protection. Free reprints are available from either Bob (518-869-6959) or Eric (516-722-5542).

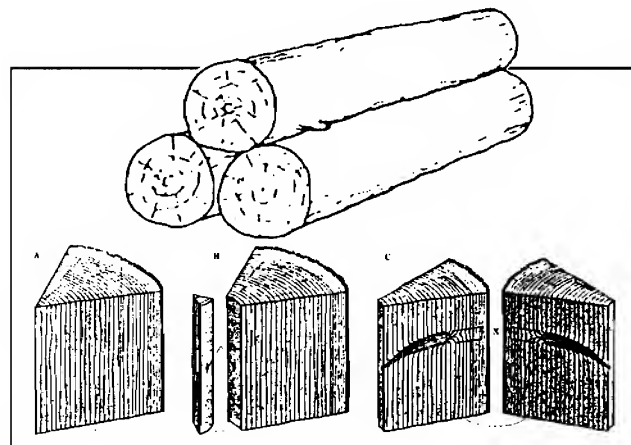
Splitting Oak

How satisfying it is to split chunks of solid oak. To see the pieces fall away under the wedge; to smell the tannic acid released. The odor alone is worth the effort of hefting the heavy sledge, hoisting it over my shoulder and coming down squarely on the head of the wedge. To hear the ping of a solid hit and feel it bite into the grain and begin the separation. The second hit, if solid, begins to release the tension of the fibers, held together for fifty or more years. The sound of the tearing fibers is yet another satisfaction.

I have to remove my sweatshirt as the perspiration begins to bead upon my forehead and I feel the heat beneath it. The joy comes from not only a well-placed hit, but also from a single blow that cleanly severs the one piece into two. The bark falls away and I throw it on a separate pile as a place for the sow bugs to congregate as well as a few centipedes. To feel the heat in a wedge quickly removed from a piece that resists the several blows I have to apply, ah, that's the joy of splitting oak.

Sometimes I have to reposition the wood to get a better aim on it. Sometimes I have to brace the piece so it can't fall over with the strike.

I throw the new pieces in a pile and smell the air-filled tannic acid. I stack it on the wheelbarrow and lug it to the pile. I pull off the cover and discover a small garter snake that has made it's home in the woodpile. Oh, how many pleasures there are to splitting and stacking wood. It is my form of insurance, for I bank the impressions and write them here. Surely I've gotten heat out the wood thrice; once in splitting, once in exercise, and finally on the hearth.--**Thomas Allen Stock**

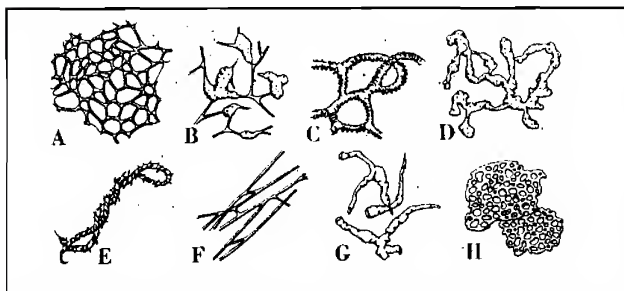


Myxobacterales are not slime molds

Every now and then, I suppose, even the most ardent mycologist or botanist is at a loss for words upon finding an old log that seems to sparkle in the morning sun with many different and colorful species of myxomycete. On this particular July morning, we find such an entity and reach for our hand-lens to have a closer look at these 'micro-gems.' Here scattered across this decaying log are maroon colored baskets resembling Japanese lanterns; "hundreds of coral-red, cotton-candy structures and numerous yellow 'globes' mounted on tiny black stalks. But, our attention is drawn to those brackets of "turkey-tail" fungi (*Trametes versicolor*), aglow with a profusion of tiny, orange-colored dots. What strange, new species of slime molds are these?

Somewhere, in the universal relationship of all living things, three interesting and rather unique groups of organisms developed similar life histories. These organisms, however, which include the fungi, protozoa and bacteria, did not develop from any common ancestor!

The first group are the familiar myxomycetes or slime molds. In their life cycle, swarm cells released by the spores, lose their flagella and fuse into a large, multinucleated mass called a plasmodium. During the formation of the fruiting structures, **diploid** nuclei in the plasmodium undergo meiosis (or reduction) forming **haploid** spores which are embedded in the capillitium of the sporangia. Herein is your first lesson into the sexual world of the fungi.



Several types of capillitium. A. *Stemonitis*, B. *Physarum*, C. *Arcyria*, D. *Badhamia*, E. *Trichia*, F. *Didymium*, G. *Lycogala*, H. *Reticularia*

In the second group of organisms, the "cellular slime molds," or Acrasiales, the swarm cells are released from the spores without flagella and they are referred to as myxoamoebae. Unlike the 'true slime molds,' they form a slug-like pseudoplasmodium (or false plasmodium) wherein the cells never fuse and remain **haploid**. They also develop a fruiting structure and although it closely resembles the sporangia of the

myxomycetes the stalk and sorocarp are composed of individual cells which do not form any capillitium. In fact, many modern biology books rightfully refer to these organisms as complex protozoa. So within the world of both animals and fungi there has evolved a similar, although totally independent life-history.

Now, lets get back to those orange dots on that polypore. These are **bacteria**, the third and last group of organisms having a life-history that closely parallels that of the 'slime molds.'

In 1892, Dr. Thaxter wrote about a phenomenon that he found among a group of bacteria that move by gliding; they are 'social' organisms producing a fruiting body with spectacular beauty. The fruiting structures are, however, inherently small, requiring a microscope to observe any detail, but are generally produced in such large numbers that they are easily conspicuous to the naked eye. In the vegetative stage, the rods swarm within a matrix composed of slime. During the formation of the fruiting bodies, the cells aggregate upon the slime stalk, on which the vegetative cells (or rods) are converted into resting cells (myxospores) within the walls of sporangia-like bodies called sporangioles. The fruiting body, however, has **no sexual function** and the organism retains its bacterial (or prokaryote) cellular structure.

Stigmatella aurantiaca is a common species of 'slime-bacteria' occurring frequently on wood and having the appearance of miniature 'treelets' each little stalk containing clusters of sporangioles. Their taxonomy is based upon the characteristics of their fruiting structures and unlike other bacteria species, these specimens can also be air-dried and mounded in small boxes.

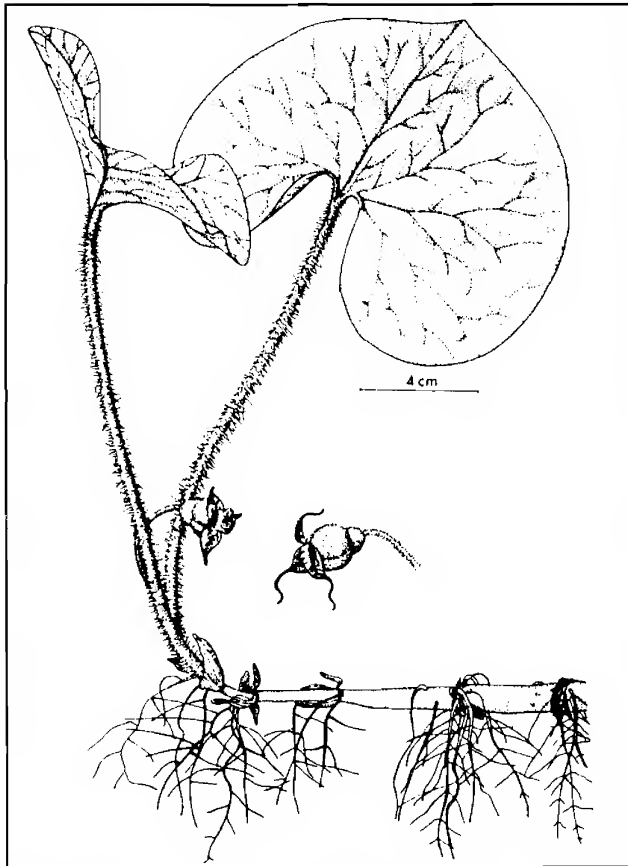
In summary, I hope that I have at least sparked a new awareness for these fascinating and colorful organisms that are generally overlooked by most students. I wish you successful hunting on those old, rotten logs and lichen covered trees during your woodland walks this summer.--**Lance T. Biechele**, 14011 Cooley Road, Princess Anne, Maryland 21853

References

- McCurdy, H. D. 1974. Myxobacterales. In Buchanan, R. E., Gibbons, N. E. (eds.). *Bergey's Manual of Determinative Bacteriology*. 8th ed. Williams & Wilkins, Baltimore.
- Reichenbach, H. & M. Dworkin. 1981. The order Myxobacterales. In *The Prokaryotes* (vol. 1). Starr, et al. (eds.) Springer Verlag, NY.

Ramblings of a Naturalist

Back in the 1970's when I was young, had energy, and was recently out of college, I worked as a naturalist (the County called us "environmental guides") for the Suffolk County Department of Parks and Recreation. The County had many lands under their protection, and some of them were and still remain gems of open space. One of the nicest parks, and least used, was West Hills County Park and its surrounding hills.



Asarum canadense L. From Mitchell, R. S. & E. O. Beal. 1979. Magnoliaceae through Ceratophyllaceae of New York State. NY Mus. Bull. 435.

We naturalists were sometimes allowed to roam through the woods of West Hills and add to the Park inventory lists which were then almost non-existent. While hiking along some horsetrails in an "unexplored" part of the Park, I was astonished to come across Wild Ginger (*Asarum canadense* L.). I had not known it to occur on Long Island, and this species seemed far from its natural range. Several feet down the trail I couldn't believe my eyes when I came across two plants of Galax, also known as Beetleweed (*Galax aphylla* L.). I had previously known the plant from hiking in the Great Smoky Mountains, and had learned that it was a

southern plant just extending north to the mountains of western Maryland, West Virginia, and Kentucky. The West Hills population was over 300 miles disjunct from the next nearest population. "What a find," I thought. Several hundred feet away from the Galax was a large population of Greater Coreopsis (*Coreopsis major* Walt.). This population was also hundreds of miles away from the next nearest population in southern Pennsylvania.

I surmised that seeds of these three species were introduced to West Hills one way or another by the horses that traveled the paths, either in horsefeed, horse droppings, or whatever. Another possibility was that the plants were introduced by someone - perhaps this part was near the site of an old homestead.

I returned to my supervisor and told of my discovery. He couldn't believe it, and told me to prove it. So I did, with photographs, and then he believed! I've been using the slides in lectures for almost 20 years. I never knew until recently that these plants were records for the area and/or New York State. I told several people about it but no one ever suggested that they might be State records, and back in the mid-1970's I didn't know what channels to use to report these rare plant findings. Anyhow, it was a nice find for me and one that I won't forget. It was all part of a day's work roaming the West Hills.--Mary Laura Lamont

Editors Note: The preceding paper was submitted this summer. I was unable to put it in the September issue because of space constraints. Just before it was received Andy Greller and I submitted a paper to the New York Flora Association on the same subject. Andy and I have been studying West Hills County Park for the past several years and were unaware that others were familiar with the species at this site.

For those interested in this site our paper will be appearing in the next NYFA newsletter. We identify several rare or unusual species in addition to those mentioned by Mary Laura Lamont.--Steven Clemants

The New York Natural History Conference

The third New York Natural History Conference will be held April 13-15, 1994, at the New York State Museum, Albany, NY.

This conference provides a forum for current research on the natural history of New York. This year for the first time there will also be a series of workshops on identification of selected groups. Including **Pollen & Mold Identification** and **Orchid Identification**. For information please contact the New York Biological Survey or call (518) 474-5812.

SOCIETY NEWS

September Meeting--Sept. 14

Max Wheat talked about the 1994 Fall Festival being sponsored by the New York State Tourism Bureau. Part of the I Love NY campaign. In 1994 it will be hosted on Long Island. LIBS has been asked to participate. More details will follow.

Eric Lamont reported Sea-purslane, *Sesuvium maritimum* (Walt.) BSP. on Gardners Island.

Skip Blanchard and Al Lindberg found *Heracleum mantegazzianum* Somm. & Lev., the Giant Hogweed, on Long Island.

Eric Lamont led the society through the intricacies of Goldenrod identification. He presented a slide lecture on the characters used in identification of goldenrods then he presented live material and had the members practice using keys he published in the LIBS newsletter last year. The identifications were graded and all passed.

October Meeting--Oct. 12

Horst Welzel presented a very thorough and informative slide lecture on the Mushrooms of Long Island. It was apparent to all present that **Horst** knows and loves mushrooms and has been studying them for many years.

Executive Board Meeting

A meeting of the Executive Board will be held on 23 November 1993 at 7:00 pm (before the Flora Committee meeting), at the Planting Fields Arboretum Library. All members are welcome to attend.

Election of Officers

Voting for new officers will take place on 9 November 1993, 7:30 pm, at the monthly meeting. The proposed slate is as follows:

President **Eric Lamont**
Vice President **Steven Clemants**
Treasurer **Carol Johnston**
Recording Secretary **Barbara Conolly**
Corresponding Secretary **Jane Blanchard**

Special Publication: The Long Pond Greenbelt

The South Fork Natural History Society has just released a 48 page publication on the Long Pond Greenbelt of Southampton Township. The publication includes over 30 articles: 9 articles on Social History (including topics such as native American settlements, and excerpts (1885-1894) from the diary of Annie Cooper), 14 articles on Natural History (vegetation, mushrooms, hydrology, geology, birds, Poxabogue Pond, mammals, otters, fish, turtles, snakes, frogs & toads, salamanders, butterflies, and dragonflies), and 4 articles on Preservation. Also included are several maps (historical and current hiking trails), and over 50 paintings. The publication is free for members of the Society; for information please call Carol Crasson at 516-267-7944.

Education Committee News

LIBS exhibited two display tables at the week long Fall Flower and Landscape Show at Planting Fields Arboretum. **Mary Laura Lamont** gratefully acknowledges the volunteers who gave their valuable time and energy to staffing the display: **Joanne Tow, Zu Proly, Robert Laskowski, and William Titus**. The display was seen and enjoyed by several thousand people and the Planting Fields Show Committee gave our Society an Exhibitors Award, pictured below.--
Mary Laura Lamont

LIBS also wants to acknowledge **Mary Laura Lamont** for all her efforts on behalf of the society.

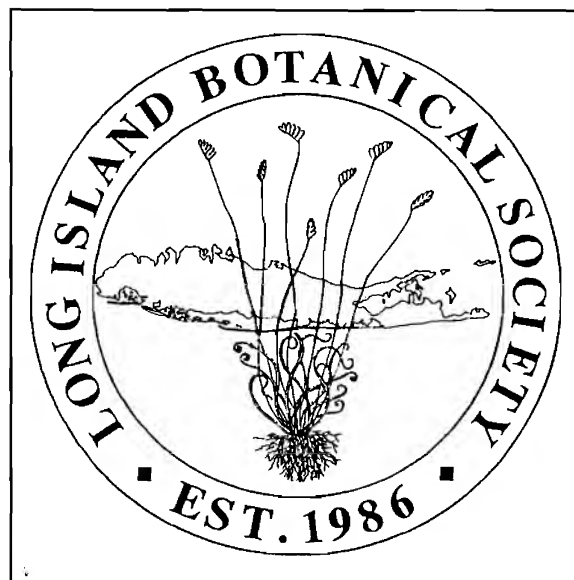


LONG ISLAND BOTANICAL SOCIETY

Founded: 1986; Incorporated: 1989.

The Long Island Botanical Society is dedicated to the promotion of field botany and a greater understanding of the plants that grow wild on Long Island, New York.

President	Eric Lamont
Vice President	Chris Mangels
Treasurer	Carol Johnston
Recrd Sec'y	Barbara Conolly
Cor'sp Sec'y	Jane Blanchard
Local Flora	Skip Blanchard
Field Trip	Glenn Richard
Membership	Lois Lindberg
Conservation	Louise Harrison
	John Turner
Education	Margaret Conover
	Mary Laura Lamont
Hospitality	Nancy Smith
	Joanne Tow
Program	Eric Lamont
Editor	Steven Clemants



Membership

Membership is open to all, and we welcome new members. Annual dues are \$10. For membership, make your check payable to LONG ISLAND BOTANICAL SOCIETY and mail to: Lois Lindberg, Membership Chairperson, 45 Sandy Hill Rd., Oyster Bay, NY 11771-3111

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